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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,968	05/22/2001	John Andrew Aiken JR.	5577-233	9829
20792	7590	06/13/2006	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			VU, VIET DUY	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/862,968		AIKEN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Viet Vu		2154	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,25-27,31,33 and 35 is/are allowed.
- 6) ☒ Claim(s) 1,13-17,24,28-30,32,34 and 36-47 is/are rejected.
- 7) ☒ Claim(s) 2-11 and 18-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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**Art Rejections:**

1. The text of 35 U.S.C. 103(a) cited in the previous office action is hereby incorporated by reference.

2. Claims 1, 13-17, 24, 28-30, 32, 34, and 36-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howes, U.S. pat. No. 6,324,177.

Per claim 1, Howes discloses a system and method for assigning a physical port to a connection originated by one of multiple application instances executing on different data processing systems and utilizing a common virtual network address of a virtual machine comprising:

a) providing indication of availability of a server, i.e., publishing network addresses, to each of the data processing systems (see col 6, lines 3-6);

b) selecting a real port on an available real machine as the virtual port for the connection utilizing the common virtual network address of the virtual machine (see col 4, lines 39-42).

Howes does not explicitly teach providing indication of an available port of the virtual machine to the clients. It is however noted that in TCP/IP communications it is required that IP address and port ID of virtual server be known to the client before connection can be established (see col 3, lines 28-31 and col 4, lines 36-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize in Howes that both IP address and port ID of an available and accessible server be provided to the clients because it would have enabled establishing connections between clients and servers (see col 4, lines 36-37 and col 6, lines 3-6).

Per claims 13-14, Howes teaches maintaining a data structure in a coupling facility that is commonly accessible by a plurality of virtual machines (220, 230, fig. 2) for indicating and tracking available real machines (224, 228, fig. 2), each having physical address and port ID, for use by the virtual machines (see col 4, lines 37-39 and col 6, lines 36-58). An official notice is also taken that the use of communication protocol stack to perform session/connection establishing is well known in the art. It would have been obvious to one skilled in the art to utilize such communication stack at the virtual machine for performing session/connection establishing including port selection (see col 4, lines 37-42).

Per claim 15, it would have been obvious to one skilled in the art that Howes' teachings would have been applicable to any conventional communication networks.

Per claims 16-17, 28-30, 34, and 36-37, Howes teaches accessing, evaluating and updating the data structure, e.g., link/routing hash table, to select a physical port in response to new connection request (see col 9, lines 40-63).

Per claims 24 and 32, it would have been further obvious to one skilled in the art to perform updating the data structure in response to a termination of a connection because it would have enabled reclaiming system resources for use by future connection requests.

Claims 38-47 are similar in scope as that of claims 1, 13-17, 24, 28-30, 32, 34 and 36-37.

**Allowable Subject Matter:**

3. Claims 2-11 and 18-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 12, 25-27, 31, 33 and 35 are allowed over prior art of record.

**Response to Arguments:**

5. Applicant's arguments filed on 4/19/06 with respect to claims 1, 13-17, 24, 28-30, 32, 34, and 36-47 have been fully considered but they are not deemed persuasive. It is noted that the rejection has been revised to address applicant's arguments in the remarks.

Applicant asserts that Howes does not teach or suggest indicating availability of (physical) ports to client machines that perform the port selection.

Per claim 1, the examiner submits that Howes' disclosure requires or at least suggests providing IP address (i.e., publishing IP address) and port ID of an available virtual machine to client because such information are needed by the client in order to make a connection request (see col 3, lines 28-31 and col 6, lines 3-6). Howes also teaches selecting a real port on an available real machine by the virtual machine in response to a new connection request by the client (see col 4, lines 37-42 and col 6, lines 36-45). Since claim 1 still fails to clearly specify the port selection is performed by client machine, the examiner submits that Howes' teachings meet claim limitations as set forth in item 2 above.

Per claim 13 and other similar independent claims, Howes teaches maintaining a data structure in a coupling facility that is commonly accessible by a plurality of virtual machines (i.e., data processing systems) for indicating and tracking available physical machines (see col 4, lines 37-39 and col 6, lines 36-58). Since claim 13 still fails to clearly specify that the plurality of data processing systems being client machines, the examiner submits that Howes' teachings meet claim limitations as set forth in item 2 above.

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**Conclusion:**

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Vu whose telephone number is 571-272-3977. The examiner can normally be reached on Monday through Friday from 7:00am to 4:00pm. The Group general information number is 571-272-2100. The Group fax number is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached on 571-272-3964.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VIET D. VU  
PRIMARY EXAMINER

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6/8/06